Society for Underwater Technology EVENING TECHNICAL MEETING

On the Fringes of FLNG

Wednesday, 19th August 2015 Parmelia Hilton Hotel (Swan Room), Mill Street, Perth



Registration 5.30 pm: Presentations 6.00 pm – 7.30 pm Networking over drinks and finger food 7.30 pm – 9.00 pm

Chaired by: Chris Saunders, Senior Pipeline Engineer, INPEX

Technical and Practical Challenges of FLNG

Jeff Baker, Technical Manager, Australasia, Lloyd's Register Energy

The Oil and Gas Industry will soon be welcoming its newest production facility concept into reality, in the shape of two Floating LNG (FLNG) facilities from Petronas and Shell (Prelude) currently being built in different shipyards in South Korea. The facilities are destined for Malaysian and Australian waters. Much has been said about the opportunities that FLNG offers, particularly for stranded gas fields and a large number of stakeholders including Operators, EPCs, Suppliers, Regulators, Unions and Third Party expert bodies have become involved in the debate over this technology and its applicability, especially in today's times of lowered oil prices. Presently, most attention is being devoted to the very large new build vessels being built or planned and the challenges that scale, remote location and robustness brings, but new ideas are coming forward. This innovative technology presents the industry with multiple, and variable challenges across a wide range of engineering solutions and disciplines. This presentation summarises some of the key technical challenges being faced to deliver this exciting new type of facility.

Can the SEA FLNG Approach Monetise Small Australian Stranded Gas Resources?

Francesco Piasentin, Facilities Consultant, S2V Consulting Pty Ltd

Australian LNG developments are perceived to require large reserves to support a business case, which implies complex projects with high budget and schedule risk. As gas demand drives marginal field developments in South East Asia, FLNG is being adopted as a novel concept for producing smaller fields distant from accessible markets, with for example two small-scale FLNG projects coming online in the next few years. This represents a paradigm shift in the SEA gas monetization strategy. This presentation examines the SEA FLNG approach as an opportunity for Australia's small, stranded gas resources.

FLNG Riser Design Challenges

Christian Wiebe, Consultant, Wood Group Kenny Australia

Mention FLNG and most people focus on the very large floating platforms that are a key component for this new technology. However, one of the major design challenges for FLNG are the risers that will be connecting the FLNG platforms with the subsea infrastructure. How are risers being designed for a 40 year design life, cyclonic metocean conditions, floating facilities that do not disconnect in design storms, internal fluid temperatures and pressures above existing qualified material limits? This presentation will highlight some of the lessons learnt from experience drawn from the Prelude, Abadi, Bonaparte and Browse projects.

FLNG and the Cow

Dr James Holbeach- Manager; Subsea, Risers, Flow Assurance and Process, Wood Group Kenny Australia Imagine you are hurtling along in a car doing 110km/h and there is a cow on the road ahead... Would you want that cow

to be 800m away or 6m away when you see it? How fast will your brakes respond? Will your car respond automatically or does it require all driver inputs? Can you avoid the accident and if not what can you do to minimise the damage?... Upstream operation of an FLNG facility is similar to driving a car at high speed on a country road at night and understanding this aspect in design phase is the key to ensuring a robust reliable facility.

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